Abstract of the Disclosure

Provided is an adaptive packet transmission method in a cellular mobile communication system using a multibeam satellite. The method includes the steps of: a) being periodically reported, from mobile stations, of average receiving power levels of beam pilot signals transmitted in a plurality of beams; b) estimating a path gain between beams and the mobile station based on the reported average power levels of beam pilot signals; c) determining priorities for packets to be transmitted to each of the mobile stations; d) selecting a beam requiring the lowest transmission power for transmitting the packet having the highest priority, and allocating the lowest power required for satisfying a predetermined packet reception quality when the packet is transmitted in the selected radio resource, by using the path gain estimated for each of the mobile stations; and e) if the radio resources and/or the transmission power that can be used are not sufficient or if there is a packet to be allocated, performing the step c).